

WHAT IS CLAIMED IS:

1. A coextruded hot-blown film having at least three layers, the film comprising a core layer and, optionally, at least one intermediate layer sandwiched between two skin layers, the film having a haze value of less than about 15%, a 2% secant modulus greater than about 50,000 psi and a cross-directional (CD) shrinkage greater than 0%.
- 5 2. The film of Claim 1, wherein:
 - 10 (a) the inner layer, or layers, comprises at least one stiffening polymer selected from the group consisting of: low density polyethylene, linear low density polyethylene, high density polyethylene, blends thereof, polypropylene homopolymer, polypropylene random copolymer, styrene/butadiene copolymer, polystyrene, ethylene-vinyl acetate copolymer and cyclic-olefin copolymer, provided that when more than one inner layer is present, the inner layers can be the same or different; and,
 - 15 (b) the skin layers, which may be the same or different, comprise at least one of: low density polyethylene; a blend of low density polyethylene and linear low density polyethylene; a blend of low density polyethylene and very low density polyethylene; polystyrene; ethylene-vinyl acetate copolymer; a blend of ethylene-vinyl acetate copolymer and linear low density polyethylene; cyclic-olefin copolymer; styrene-butadiene copolymer; or, polypropylene random copolymer, provided that the skin
20 layers are devoid of a homogeneously branched polyethylene resin prepared with a single site catalyst.
3. The film of Claim 1 wherein the film has 5 layers.
4. The film of Claim 3 wherein the film is characterized by a cross-directional shrink force of at least about 6 psi.
- 25 5. The film of Claim 3 having a film structure of A/B/C/B/A or A/B/C/D/E.
6. The film of Claim 3 having a 2% secant modulus greater than about 100,000 psi.

7. The film of Claim 3 having a cross-directional shrink of between 0% and about 50%.
8. The film of Claim 2 wherein the low density polyethylene of the inner layer or layers has a melt index, I_2 , of less than or equal to 1.0.
- 5 9. The film of Claim 1 wherein the film has 3 layers.
10. The film of Claim 9 having a film structure of A/B/A or A/B/C.
11. The film of Claim 9 having a 2% secant modulus greater than about 60,000 psi.
12. The film of Claim 9 having a 2% secant modulus greater than about 70,000 psi.
13. The film of Claim 9 having a 2% secant modulus greater than about 80,000 psi.
- 10 14. The film of Claim 9 having a 2% secant modulus greater than about 100,000 psi.
15. The film of Claim 9 having a cross-directional shrink of between 0% and about 50%.
16. A coextruded hot-blown film having at least three layers, the film comprising a core layer and, optionally, at least one intermediate layer sandwiched between two skin layers, the film having a haze value of less than about 5%, a 2% secant modulus greater than about 50,000 psi and a cross-directional (CD) shrinkage greater than 0%.
- 15 17. The film of Claim 16, wherein:
- (a) the inner layer, or layers, comprises at least one stiffening polymer selected from the group consisting of: low density polyethylene, linear low density polyethylene, high density polyethylene, blends thereof, polypropylene random copolymer, styrene/butadiene copolymer, polystyrene, ethylene-vinyl acetate copolymer and cyclic-olefin copolymer, provided that when more than one inner layer is present, the inner layers can be the same or different; and,
- 20
- (b) the skin layers, which may be the same or different, comprise at least one of: low density polyethylene; a blend of low density polyethylene and
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- linear low density polyethylene; a blend of low density polyethylene and very low density polyethylene; polystyrene; ethylene-vinyl acetate copolymer; a blend of ethylene-vinyl acetate copolymer and linear low density polyethylene; cyclic-olefin copolymer; styrene-butadiene copolymer; or, polypropylene random copolymer, provided that the skin layers are devoid of a homogeneously branched polyethylene resin prepared with a single site catalyst.
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18. The film of Claim 16 wherein the film has 5 layers.
19. The film of Claim 18 having a film structure of A/B/C/B/A or A/B/C/D/E.
- 10 20. The film of Claim 16 having a 2% secant modulus greater than about 100,000 psi.
21. The film of Claim 16 having a cross-directional shrink of between 0% and about 50%.
22. The film of Claim 17 wherein the low density polyethylene of the inner layer or layers has a melt index, I_2 , of less than or equal to 1.0.
- 15 23. The film of Claim 16 wherein the film has 3 layers.
24. The film of Claim 16 having a film structure of A/B/A or A/B/C.
25. The film of Claim 16 having a 2% secant modulus greater than about 100,000 psi.
26. The film of Claim 16 having a cross-directional shrink of between 0% and about 50%.
- 20 27. The film of Claim 16 wherein the film is characterized by a cross-directional shrink force of at least about 6 psi.
28. The film of Claim 16 wherein the skin layers comprise polystyrene, styrene-butadiene copolymer or cyclic-olefin copolymer.
- 25 29. The film of Claim 28 wherein the cyclic-olefin copolymer is an ethylene-norbornene copolymer.

30. A process for preparing a film having at least 3 layers, the process comprising the step of coextruding, via a hot-blown film process, a film comprising at least one inner layer between two skin layers, wherein:

- 5 (a) the inner layer, or layers, comprises at least one stiffening polymer selected from the group consisting of: low density polyethylene, linear low density polyethylene, high density polyethylene, blends thereof, polypropylene random copolymer, styrene/butadiene copolymer, polystyrene, ethylene-vinyl acetate copolymer and cyclic-olefin copolymer, provided that when more than one inner layer is present, the inner layers can be the same or
10 different; and,
- (b) the skin layers, which may be the same or different, comprise at least one of: low density polyethylene; a blend of low density polyethylene and linear low density polyethylene; a blend of low density polyethylene and very low density polyethylene; polystyrene; ethylene-vinyl acetate
15 copolymer; a blend of ethylene-vinyl acetate copolymer and linear low density polyethylene; cyclic-olefin copolymer; styrene-butadiene copolymer; or, polypropylene random copolymer, provided that the skin layers are devoid of a homogeneously branched polyethylene resin prepared with a single site catalyst; and
- 20 (c) the film has a haze value of less than about 15%, a 2% secant modulus greater than about 50,000 psi and a cross-directional shrinkage greater than 0%,

with the proviso that the hot-blown film process does not comprise double-bubble or tenter-frame orientation processes.

25 31. The process of Claim 30 wherein the film has 5 layers.

32. The process of Claim 30 wherein the film has a film structure of A/B/C/B/A or A/B/C/D/E.

33. The process of Claim 30 wherein the film has a 2% secant modulus greater than about 100,000 psi.

34. The process of Claim 30 wherein the film has a cross-directional shrink of between 0% and about 50%.
35. The process of Claim 30 wherein the low density polyethylene of the intermediate layer or layers has a melt index, I_2 , of less than or equal to 1.0.
- 5 36. The process of Claim 30 wherein the film has 3 layers.
37. The process of Claim 30 wherein the film has a film structure of A/B/A or A/B/C.
38. A process for preparing a film having at least 3 layers, the process comprising the step of coextruding, via a hot-blown film process, a film comprising at least one inner layer between two skin layers, wherein:
- 10 (a) the inner layer, or layers, comprises at least one stiffening polymer selected from the group consisting of: low density polyethylene, linear low density polyethylene, high density polyethylene, blends thereof, polypropylene random copolymer, styrene/butadiene copolymer, polystyrene, ethylene-vinyl acetate copolymer and cyclic-olefin copolymer, provided that when
- 15 more than one inner layer is present, the inner layers can be the same or different; and,
- (b) the skin layers, which may be the same or different, comprise at least one of: low density polyethylene; a blend of low density polyethylene and linear low density polyethylene; a blend of low density polyethylene and
- 20 very low density polyethylene; polystyrene; ethylene-vinyl acetate copolymer; a blend of ethylene-vinyl acetate copolymer and linear low density polyethylene; cyclic-olefin copolymer; styrene-butadiene copolymer; or, polypropylene random copolymer, provided that the skin layers are devoid of a homogeneously branched polyethylene resin
- 25 prepared with a single site catalyst; and
- (c) the film has a haze value of less than about 5%, a 2% secant modulus greater than about 50,000 psi and a cross-directional shrinkage greater than 0%,

with the proviso that the hot-blown film process does not comprise double-bubble or tenter-frame orientation processes.

39. The process of Claim 38 wherein the film has 5 layers.
40. The process of Claim 38 wherein the film has a film structure of A/B/C/B/A or
5 A/B/C/D/E.
41. The process of Claim 38 wherein the film has a 2% secant modulus greater than about 100,000 psi.
42. The process of Claim 38 wherein the film has a cross-directional shrink of between 0% and about 50%.
- 10 43. The process of Claim 38 wherein the low density polyethylene of the intermediate layer or layers has a melt index, I_2 , of less than or equal to 1.0.
44. The process of Claim 38 wherein the film has 3 layers.
45. The process of Claim 38 wherein the film has a film structure of A/B/A or A/B/C.
46. The film of Claim 38 wherein the film is characterized by a cross-directional
15 shrink force of at least about 6 psi.
47. The film of Claim 38 wherein the skin layers comprise polystyrene, styrene-butadiene copolymer or cyclic-olefin copolymer.
48. The film of Claim 47 wherein the cyclic-olefin copolymer is an ethylene-norbornene copolymer.